

OpenGeo Presentation to NOAA DMIT

April 4th, 2012

OpenGeo Background

- Supports open source geospatial worldwide
 - Community and Enterprise versions
 - Global support and service
 - Training
 - Advanced software development
- Founded 2002
- Global Partner Network

OpenGeo Supported Clients

- US Federal
 - Army Geospatial Center
 - FCC
 - NGA
 - NOAA
 - State Department
 - USGS



OpenGeo Supported Clients

- US State and Local Government
 - MassGIS
 - NYC DoITT
 - Portland Trimet
 - SFMTA
 - Howard County, MD

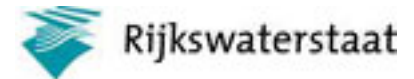


See where it takes you.



OpenGeo Supported Clients

- International Government
 - AIFDR
 - Australia New Zealand Spatial Marketplace
 - Finnish Ministry of Agriculture (Tike)
 - IGN
 - Landgate (Australia)
 - Ordnance Survey
 - Rijkswaterstaat (Netherlands)



OpenGeo Supported Clients

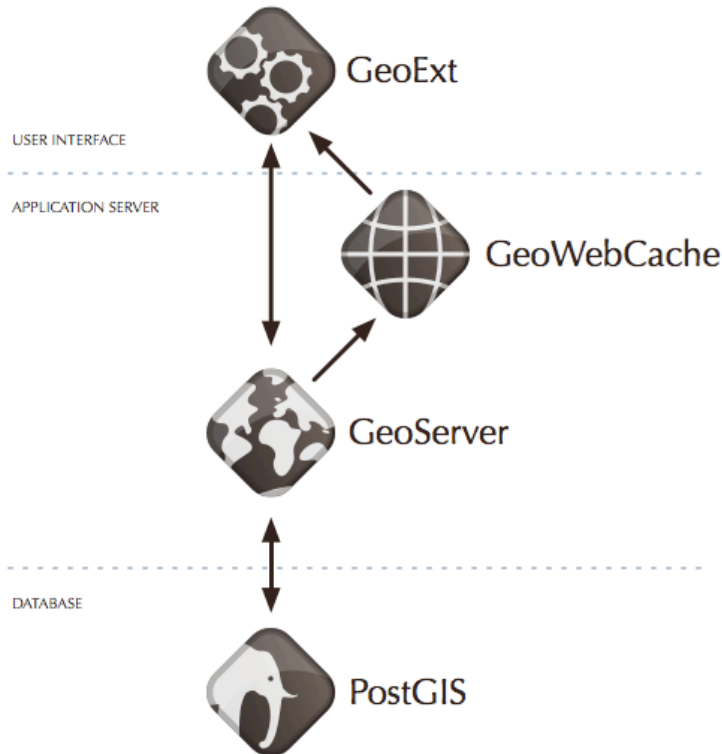
- International
 - Austrian Federal Railways
 - EB Services
 - Ericsson
 - GEM Foundation
 - Grontmij-Calbro (Denmark)
 - NavCanada
 - SWECO (Sweden)
 - The World Bank



OpenGeo Suite



Bundle Five Open Source Projects



- User interface map component: **OpenLayers**
- User interface framework: **GeoExt / ExtJS**
- Application cache: **GeoWebCache** tile cache
- Application server: **GeoServer** map/feature server
- Storage: **PostGIS** PostgreSQL spatial database

The OpenGeo Suite

- Publish OGC Web Services
- Build high performance web applications through advanced framework

...all with an entire open source enterprise stack that scales massively and is easy to administer through an integrated console.

**Leverage your technical and human
infrastructure through integration with
existing enterprise architecture**

User Interface

Web-based



GeoExt



OpenLayers



Google Maps



Microsoft Virtual Earth

Desktop



uDig



Google Earth



QGIS



ArcGIS Desktop

Tiling



GWC

TileCache

Web Services



GeoServer



Mapnik



CubeWerx



MapServer



ArcGIS Server / ArcIMS



ERDAS Apollo Server

Database



PostGIS/PostgreSQL



MySQL with Spatial



IBM DB2



Oracle Spatial



Microsoft SQL Server



ArcGIS Server / ArcSDE

Keep In Touch

- Check out <http://opengeo.org>
- Email us at inquiry@opengeo.org

“Enterprise GIS Web Services Hosting Environment for NOAA”

- 2011/2012 HPCC Incubator Project
- Project goal: to **PROTOTYPE** a
 - Centralized resource, available free* to NOAA data publishers
 - Shared service potentially supported at NOAA CIO level
 - An option for how to make NOAA geospatial data more accessible to customers via OGC services

Objectives

- Solve basic problem of moving from shapefile(s) published on website to OGC-compliant services
- Apply open source software to meet agency need
- Integrate within NOAA enterprise (LDAP, WOC)
- Exclusively web-based UI and API – **HTTP Only!**
- Scalable royalty-free for more rapid enterprise deployment (no licenses necessary)

Implementation

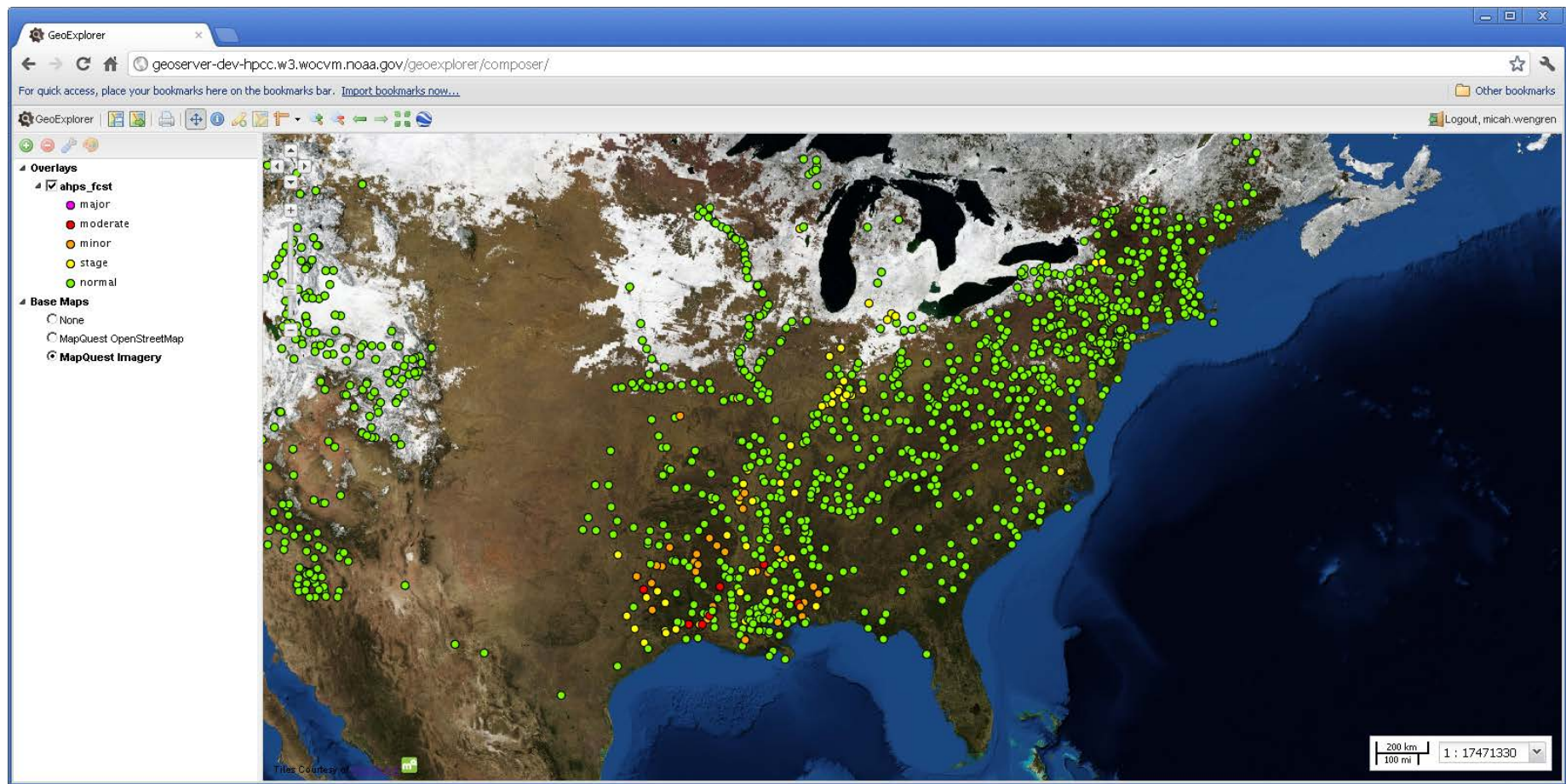
- NOAA requirements provided to OpenGeo
 - Input from NOAA GIS community, gather common needs across NOAA line offices
- Collaboration with open source developer community
 - NOAA requirements folded into core GeoServer product via 'GSIP' process: GSIP #s: 66, 67, 71, 73, 74
 - Released in next version of GeoServer
 - See: <http://geoserver.org/display/GEOS/GeoServer+Improvement+Proposals>

Data Input

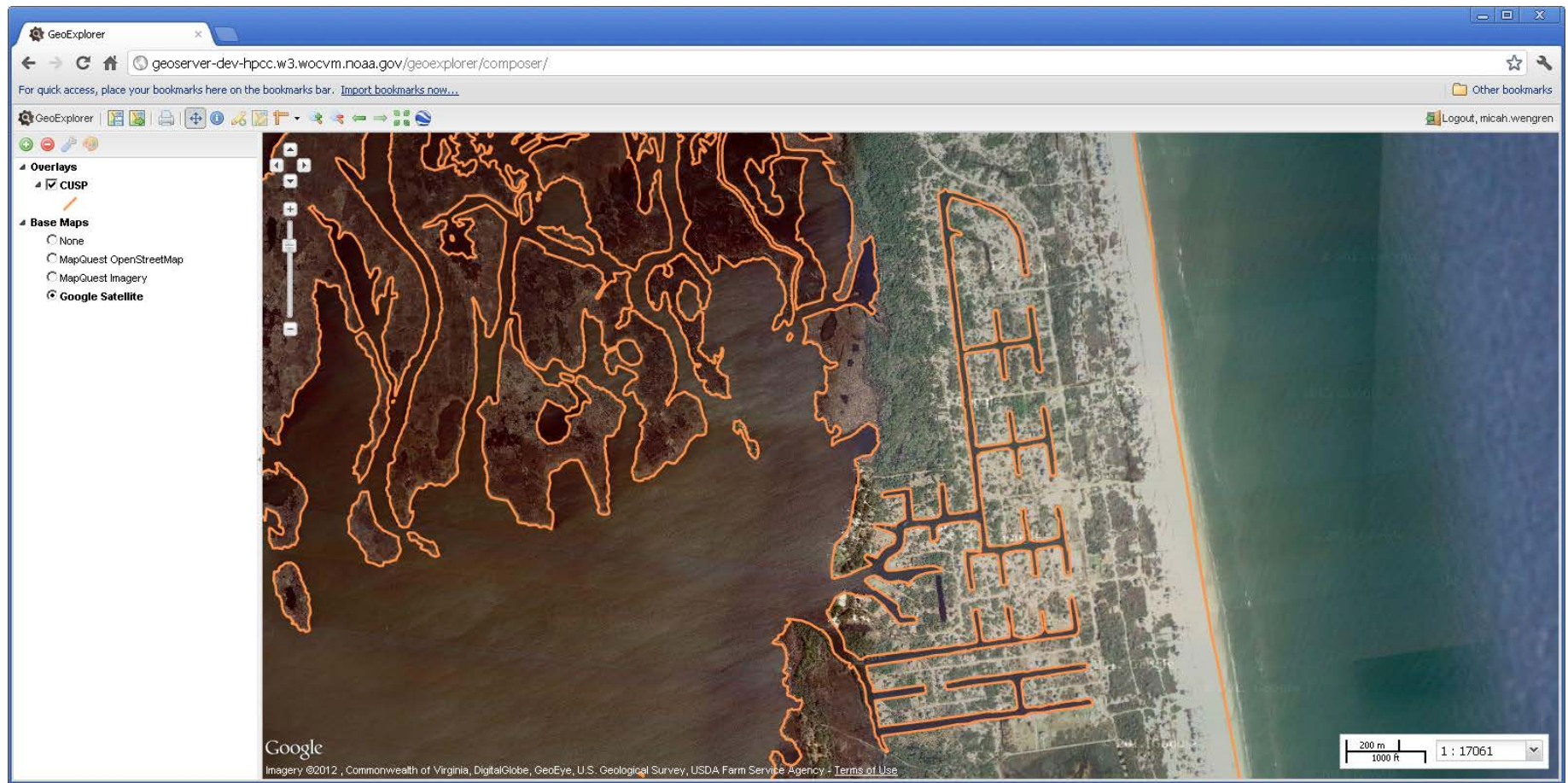
- Scriptable data upload capability
 - automated workflows supported – NWS short duration warnings, other process-generated data sets
- HTTP-based data publishing
 - REST API already provided by GeoServer

Data Retrieval

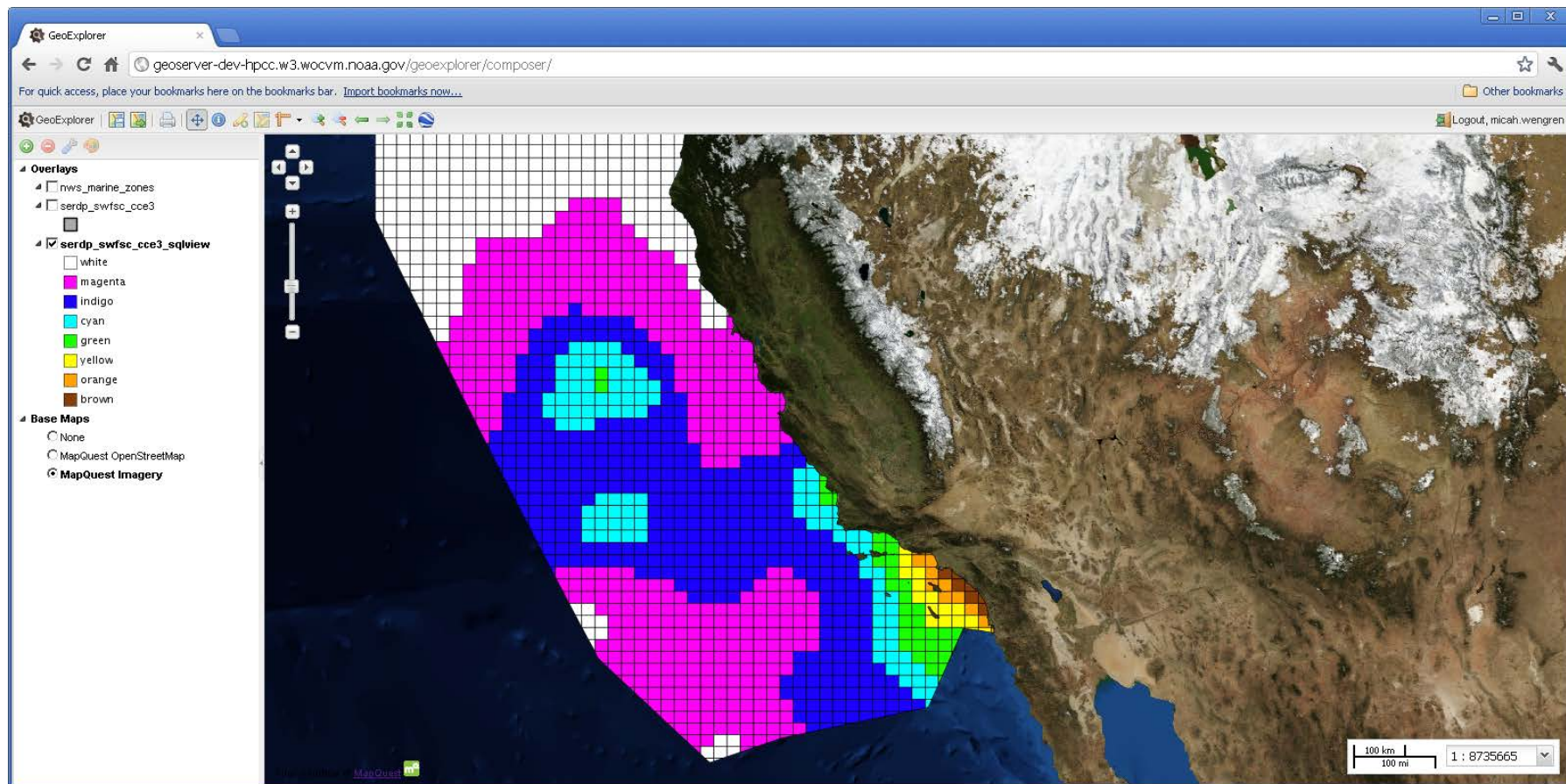
- Standards-based. Supported OGC standards:
 - Web Map Service (WMS)
 - Web Feature Service (WFS)
 - Keyhole Markup Language (KML)
- Compatible with proprietary and non-proprietary GIS systems (desktop – ArcMap, QGIS, web – ArcGIS Online, Federal GeoPlatform, GeoNode)



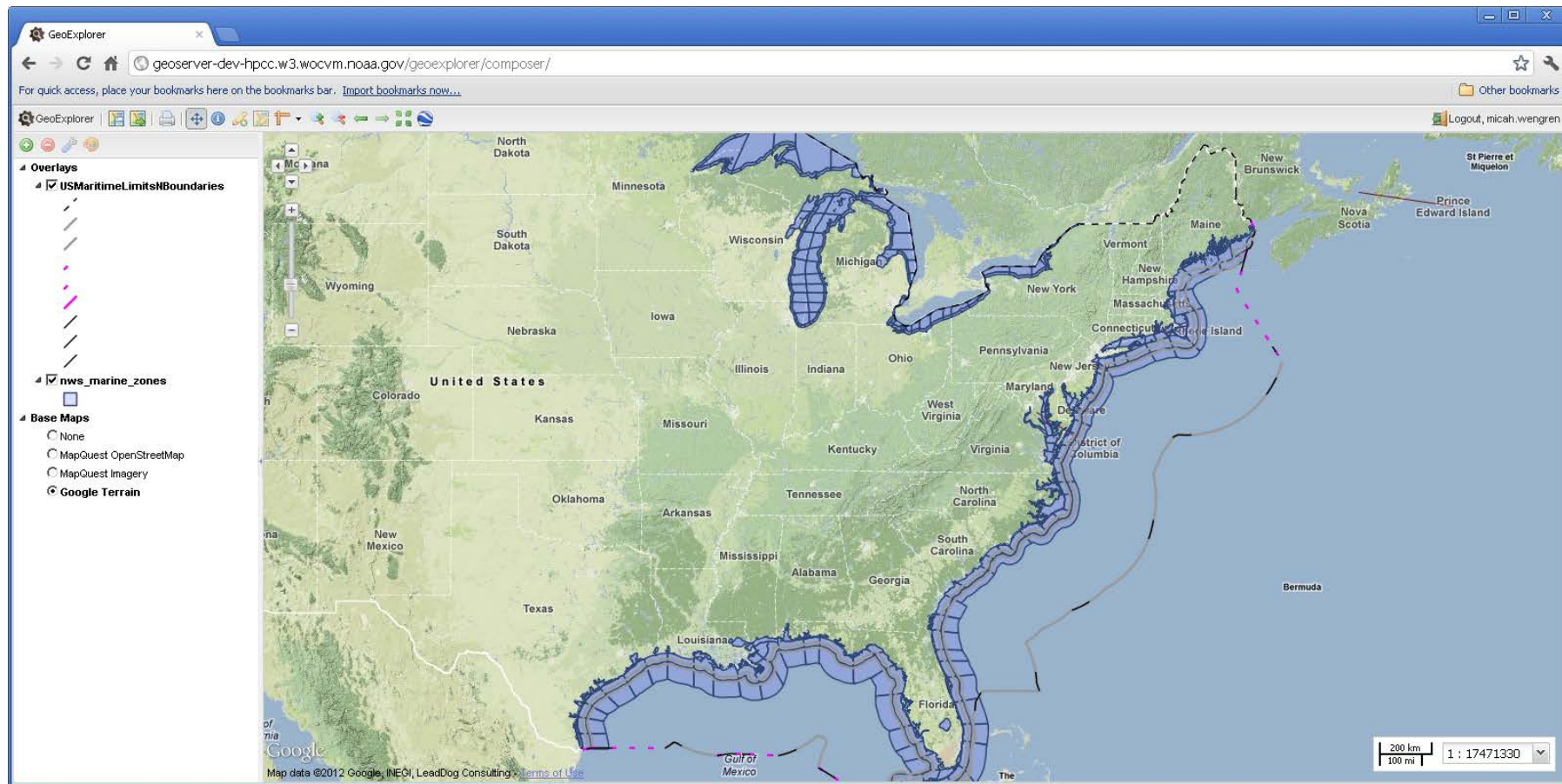
NWS Advanced Hydrological Prediction Service (AHPS) River Stage Forecasts



NGS Continuously Updated Shoreline Product (CUSP) (LIDAR-derived shoreline)



NOAA Cetacean Density and Distribution Mapping
(grid cells of short-beaked common dolphin
summer population density)



NWS Marine Forecast Zones

Office of Coast Survey Maritime Boundaries